



POWDER COATING

Technical Data Sheet

Highlights

PPG's Envirocyl™ and Envirocron® powder coatings are aesthetically pleasing, produce a durable uniform finish and can be custom formulated with finishes from high gloss to low gloss, and in a variety of textures.

PPG's "World Class" Hybrid Powder Coatings provide a combination of good physical and chemical resistance properties. This extensive line of Hybrid Powders is manufactured to meet the increasing requirement demands of the appliance, automotive and industrial markets. These sophisticated Hybrids are the solution to your smoothness, low-bake, durability and physical property requirements. An unsurpassed application development program enables consistently friendly use on a variety of substrates.

- Available in a wide range of colors and glosses
- Good chemical resistance
- Thin film capabilities

PRODUCT APPROVALS

UL Approved

Specifically formulated to meet the requirements of Caterpillar 1E2732F

PRODUCT CHARACTERISTICS

Designed as a primer for PPG's ultradurable polyester powder topcoats

TEST CONDITIONS

Property	Test method	Value
Substrate		Pretreated steel panels
Recommended Thickness	ASTM D 7091	1.5 - 1.8 mils
Curing Conditions	Metal Temperature	15 min @ 375 °F

PRODUCT PROPERTIES

Property	Test method	Value
Appearance	Visual Inspection	Smooth
Gloss 60°	ASTM D 523	60 - 90
Adhesion	ASTM D 3359	100% (5B Pass)
Hardness	ASTM D 3363	2H Pencil (Eagle)
Impact - Direct	ASTM D 2794	80 in-lbs
Impact - Reverse	ASTM D 2794	80 in-lbs
Conical Mandrel	ASTM D 522	1/8" Mandrel - No cracking
Salt spray	ASTM B 117	1000 hrs <1/8" scribe creep No blisters
Humidity	ASTM D 1735	1000 hrs <1/16" scribe creep No blisters
Specific gravity	Calculated	1.51 ± .05
Theoretical coverage	Calculated	127 ft ² /lbs at 1.0 mil 26.1 m ² /kg at 25 μm





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CURING WINDOW* (object temperature)

See Cure Curve PCF-002C

20 min @ 350 °F (177 °C)

15 min @ 375 °F (191 °C)

12 min @ 400 °F (204 °C)

*Temperature and time to be adjusted to accomplish proper curing of coating. This can be achieved using infrared, convection, or combination ovens.

STORAGE STABILITY

24 months at 80 °F maximum

Materials need to be stored in sealed plastic bags under dry and cool conditions. Do not expose to sunlight.

PPG recommends that all material be used in FIFO order (first in - first out). Materials that exceed the recommended shelf life should be tested prior to use.

SUBSTRATE PREPARATION

Surface preparation should be chosen according to the type of substrate and required performance.

The coater should test the suitability of the surface preparation before the application using appropriate test methods.

APPLICATION RECOMMENDATIONS

Electrostatic Spray

PCF90213 is a powder primer designed for use with PPG's ultradurable polyester powder topcoats. Prior to the powder topcoat application, PCF90213 can be either fused baked or fully cured. The recommended fused bake is a 2-10 minute bake cycle with a peak metal temperature of 225-400F using infrared heating or 250-425F peak metal temperature using forced air convection heating.

Inadequate fusion of PCF90213 will affect the appearance of the powder topcoat, resulting in haze and lower gloss. In this situation, increasing the fuse bake temperature for PCF90213 is recommended. PCF90213 primer will be fully cured in the subsequent powder topcoat cure process for PPG's ultradurable polyester powder topcoats.

Full curing of PCF90213 is always recommended for situations where the powder topcoat application might be delayed or not used.

Recommended Minimum / Maximum primer DFT of 1.6 - 6.0 mils (40 - 150 microns). Minimum / Maximum primer/topcoat system DFT of 3.1 - 10.0 mils (80 - 254 microns).

Coating can be applied with automatic and manual devices.

Substrate should be correctly cleaned before use.

Do not mix this product with other powder coatings.

Color and finish influenced by film thickness: a good control of the film thickness will help the consistency of the aspect.

HEALTH AND SAFETY

For comprehensive Health, Safety, and Environmental advice, please refer to the relevant Safety Data Sheets, and information printed on the product label.

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